

## Stimulated Growth and Safeguarding of the ICES Oceanographic Data Bank

### A Discussion Paper

by

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#### Abstract

During a number of years there has been a consent to build up and increase the ICES oceanographic data base to the benefit of the member countries. In parallel to this there has been an increasing demand for ICES to supply e.g. to organisations in cooperation, various data sets or data products. In this connection it has repeatedly been discovered that in many cases the data base does not contain enough data, particularly concerning nutrients, to fulfill the requirements. Various reasons for this is identified in the paper and mechanisms/arrangements are proposed to increase the supply of data to ICES with a guarantee that the data will not be circulated for unauthorised use. A spin off effect of this is that the data quality will increase for the contributing institutes as well as it will be possible to save data that otherwise may be lost.

#### Introduction

An improved understanding of the marine environment, and the processes taking place therein, should be based on the best and most extensive data sets that possibly can be obtained. ICES, through its member countries, plays an important role as a regional data centre for the collection and management of oceanographic data. The submission of data to ICES should therefore be an important task for the member governments.

At the Marine Chemistry Working Group meeting in 1988 the reasons for the insufficient submission of data, particularly nutrient data, were discussed in the Chemical Oceanography Sub-group, as it had been discussed in the previous meetings. As was clearly stated in the discussions, and as we can see from the insufficient contributions, that the reasons are not to be found in the Service Hydrographique of ICES but rather to be sought at the level of the individual contributor and his understanding of how data are treated by ICES. The MCWG adopted a recommendation aiming at stimulating the submission of data to ICES and also for the safeguarding of the data in the ICES data bank.

This paper is meant as an introduction to a discussion on how to stimulate contribution of oceanographic data to the ICES data center. It is also meant to focus on the importance of ICES as the regional data center, recognising that an improved data base also means a stronger ICES.

### **Why is there a common ICES data base?**

- \* \* Because the ICES member countries decided international cooperation is needed for a number of reason, i.a.:
- \* \* The sea water moves freely between different countries and international areas.
- \* \* No single country has the resources to create an oceanographic database of sufficient size.
- \* \* The countries have a common responsibility for the research and protection of the open international sea areas and their resources.
- \* \* A common database gives a better total overview of the sea area characteristics.
- \* \* A common high quality database makes ICES stronger and better fitted to fulfil its tasks.

### **Benefits from the ICES data base**

- \* \* It provides more information about the sea areas than any member country has resources to produce. For certain key data it contains longer time series than many countries have had opportunity to collect.
- \* \* It provides necessary background information to enable ICES (e.g. through ACMP) of fulfilling its task as advisor to member governments.
- \* \* ICES early developed a comprehensive system for data management. Many member institutes have benefitted from this experience in building their own data management system and they now also contribute to improve the data system of ICES.
- \* \* ICES provides quality screening and systematic storage of data in order to improve their quality and accessibility.
- \* \* Data that are not submitted to ICES but are withheld by single scientists/projects/institutes are endangered and may even become lost! This happens by unsuitable storage conditions, insufficient data inventories etc. All these problems are avoided if data are submitted to the ICES data base.

### **Why do not all institutes contribute their data ?**

- \* \* Several institutes, especially at the universities, have little or no contact at all with the ICES community and its work.
- \* \* Some scientists may question the comparability between their data and other data sets.

- \* \* Reporting is sometimes regarded as a lot of extra work, and people may be unfamiliar with the associated technical procedures.
- \* \* Academical competition (I should evaluate my own data before anyone else lay their hands on them !).
- \* \* No originator or data source is given credit when data are used by other people in their evaluations.
- \* \* Commercial aspects (are the data safe-guarded against improper use ?).

**What can we do to stimulate the growth and increase safeguarding of the data base ?**

- \* \* ICES, and in particular the national delegates and committee members, have to increase their efforts in informing institutes in member countries about ICES activities in order to stimulate a wider participation.
- \* \* Scientists should participate in intercalibrations to get a measure of the quality of their data. Submission of data to the data base for comparison also provides a means of assessing data quality.
- \* \* Active information from national oceanographic data centers to contact scientists and assist them in submitting their data. The scientists will discover that in return a systematic reporting of data can enhance their own data storage and data quality and thus save efforts.
- \* \* Many scientists and other data originators seem to forget the fact that they as civil servants have an obligation to provide their results, including their data. As their governments actively participate in ICES this also includes data exchange to ICES unless the government decides otherwise. Finally, data are not "consumed" once they are used in an evaluation but can be used over and over again.
- \* \* Current practices in the international community require that "due reference" is made to the originating institute. This information is not passed on when a computer tape is delivered by ICES on request. Several scientists would require individual reference and that data tapes are distributed with a covering letter stating how reference should be made.
- \* \* Data sets may represent considerable commercial value. Present procedures at ICES is to distribute data only to those scientists or institutes that contribute to the data base. A request from a non-contributing organisation or from a company is likely to be turned down. However, there is no administrative regulation to support ICES staff for this correct way of acting! Such an

administrative regulation for safe-guarding the data would ensure contributors that their submitted data could not be made available to others for commercial purposes or other non-authorized use.